

BEFORE  
THE PUBLIC SERVICE COMMISSION OF  
SOUTH CAROLINA  
DOCKET NO. 2008-196-E  
JANUARY....., 2009

INRE:

Combined Application of South Carolina Electric & Gas Company for a Certificate of Environmental Compatibility and Public Convenience and Necessity and for a Base Load Review Order for the Construction and Operation of a Nuclear Facility in Jenkinsville, South Carolina.	<b>BRIEF ON INTERVENOR MOTION TO CHANGE THE LOCATION OF TWO NEW REACTORS PLANNED BY APPLICANT AFTER THE INITIAL HEARING IN PSC.</b>

1. INTRODUCTION.

South Carolina Electric and Gas ("SCE&G"), the Applicant, submitted a Jenkinsville location site selection based on 2005 assumptions. They are no longer valid in the perspective of the next 15 years (i.e. 2024) as well as with pieces of information delivered in the hearing in December 2008.

2. FACTS.

- 2.1. The Application in its original scope has no map(s) of SCE&G network topography with generating plants, loads, and distribution lines.
- 2.2. Enclosed in Exhibit Q has Transmission Single Line diagram of 230 kV and 115 kV lines. The only one between Jenkinsville and St. George has marked its length of 135 miles (Page 17 and 19). This distance is less than Jenkinsville – Charleston (and, of course, the distance to Jasper County via Goose Creek as missed in planning in the Application). This location was ignored because the existing step down transformer has much less than 100 MVA rated power (Mr. Young testimony).
- 2.3. SCE&G submitted a set of pictures and sketches to show estimated power losses. On the image presenting the perspective of 2019, there is no significant spot of larger or concentrated load in

Jasper County. None of the witnesses from SCE&G and ORS could acknowledge any of the larger loads along the Atlantic Ocean shoreline existing in the greater Charleston area.

- 2.4. To transfer power from Jenkinsville to Jasper County's perspective large base load (24/7 operation) of over 200 miles will create much higher losses than estimated in SCE&G materials based on 2007 estimates that ignores the 2007 two-state Governors' decision. In addition, the losses in my calculations are also underestimated because I assumed a 2% loss rate instead of the acknowledged rate at the hearing about:  $(3\% \text{ per } 100 \text{ miles}) * (200 \text{ miles}) = 6\%$ .
- 2.5. A very possible public necessity of the third reactor close to the Atlantic region further promotes this location instead of Jenkinsville.
- 2.6. Avoiding unnecessary longer 230 and 115 kV lines will significantly lower initial costs of the project. SCE&G will also avoid already known risks of obtaining high voltage corridors in residential areas.
- 2.7. Cooling water problems will disappear in the new location. The alternative source will be the Atlantic Ocean.
- 2.8. SCE&G has delivered their response on my discovery – Request for Additional Information ("RAI", the Docket document # 19 44 66 entered on 8/19/2008) on 9/21/2008 (dated 9/19/2008 but not entered to the docket at that date) i.e. over 30 days after the date of RAI. The cooling water issue was a major public consideration and interest.
- 2.9. SCE&G failed to deliver data in the requested form, and the direction of existing documents did not answer my questions. Any further testimonies also failed to answer very important questions in the cooling water issues.
- 2.10. The SCE&G and ORS panels' testimonies omitted this public water necessity in the region. No statements are shown in any of the rebuttals even though my documents, docket # 19 55 28 and docket # 19 59 78, have numerical results of calculations in the above issues.

### 3. REALITY TEST:

- 3.1. Without a big MW-Needed Industry, the SCE&G nuclear 2,234 MW plant has no future.
- 3.2. An increase or decrease of the electric power demand by a single digit percentage can be easily covered by renewable energy sources e.g. solar, geothermal.
- 3.3. SCE&G has a strong nuclear energy team but not in electric energy production and distribution problems.
- 3.4. A big political mistake was to ignore the SC Governor.
- 3.5 No experts on their panel, including ORS, could technically and factually support SCE&G Application in its entire scope, especially those from outside South Carolina.
- 3.6. It seems that geopolitical and the present US economy situations do not support risks in the multi-billion dollar investments.
- 3.7. Especially when the project entails billions of dollar spent on oversea purchases, this lowers the potential to create jobs in SC, e.g. for renewable sources of energy.
- 3.8. Changing energy dependency from oil to nuclear still does not help the USA.
- 3.9. Now the only visible rescue for the two AP 1000 reactors in SC is a change to an Atlantic Ocean location (“AOL”) considering water resources and future energy load locations.
- 3.10. Submitting misleading statements and claims is not ethical to PSC and their members, just to force a wrong idea from the beginning to place Unit 2 and 3 at VC Summer, especially in light of a big decision made by the Governor in 2007 by a poor analysis done in 2005.
- 3.11. ORS was a bad “supporting group” for the above idea, with the same reasons indicated.
- 3.12. Westinghouse building two AP 1000 reactors in Florida (for 2016 and 2018) will use seawater from the Gulf of Mexico for cooling.

Supporting the above arguments:

*Ad 3.1:* The Application Forecast of power demand increasing until 2019 (should be 2024) did fail because of testimonies of Ms. Brockway and Dr. Atkins. Dr. Zhu stated that his support was just for the applied method, not for the facts of planned high jump in MW loads expected in the Atlantic shore. On the other hand, just the Jasper Ocean Terminal alone could be a load for SCE&G plant located in its neighborhood.

*Ad 3.2:* As calculated in my document submitted to PSC documents, even a “small \$100 million investment to build a PV factory” will assure potential for SE residents to compensate almost any of the predicted power demand increase to 2019 or 2024 perspective. From the security point of view, just this solution alone is superior over the Application. Mr. Newton’s testimony must be seriously estimated as a factor to decrease residential, school, and commercial customers’ loads. In addition, the conclusion of studies from the below link support an economically viable alternative:

<http://www.solarelectricpower.org/docs/Procurement%20Report%20FINAL%20-%202012-16-08.pdf>

“Although, historically, utilities outside of the Southwest have played a lesser role in the direct growth of solar power, within a decade solar power is expected to be cost-competitive in most regions of the U.S. on both a wholesale and retail basis. Silicon-based PV, a semiconductor based technology, is projected to continue downward pricing and efficiency improvements much like the computer chip. New technologies, including thin-film and non-silicon components, will also change pricing dynamics. PV prices are projected to fall from today’s \$0.15 to \$0.32 per KWh range to \$0.07 to \$0.15 per kWh within a decade. By 2025, the PV price could be \$0.04 to \$0.08 per kWh.”

*Ad 3.3:* The Application pertaining to the above issues show so many mistakes that create sufficient proof of incompetence of their authors, or at least lack of knowledgeable verifiers. Just simple examples: You cannot be so stubborn to claim that “SC has insufficient solar radiation” or “generator power factor can be 1.05” which was read by SCE&G witnesses on the PSC hearing. Two values in their stability simulation

state 26 kV as an input to a program, but the generator is reported to be 22 kV, so this may also bring a suspicious feeling to the readers, especially these expected to be in the NRC. Published table of tariffs (rates) have also basic errors and they are Exhibits in PSC docket 2008-196-E..

*Ad 3.4:* The Application has no word about the Governors' actions in the Energy domains. SCE&G as a utility company prepared the Application with so many wrongs way that it could be bad for their business and future marketing.

*Ad 3.5:* The Application ended with nice Mr. Burgess's closing arguments that contained nothing factual to support Jenkinsville vs. AOL. It was unbelievable that some expert from the SE had no idea about drought having the potential to shut down reactors. One even admitted that SC is setting temperature limits for water leaving cooling systems. Next day another expert said that it is 113°F (= 45 °C). Nothing supported by science or just plain common sense should be allowed to be ignored because of twisted legal or political opinions are presented to the PSC.

*Ad 3.6:* There are obvious changes in 2008 plus promised changes by Democrats in the future.

*Ad 3.7:* As above.

*Ad 3.8:* As above.

*Ad 3.9:* All my calculations in entered documents to PSC Docket # 2008-196-E do support and explain in a clear language a necessary AOL to save the project.

*Ad 3.10:* There are so many to list, but several were disclosed in the cross-examination sessions.

*Ad 3.11:* It is sad to state that the ORS failed to do the Application verification.

*Ad 3.12:* We, the SC people, hope that the South Carolina Public Service Commission will not be misled to approve the Jenkinsville location because we have a decidedly better AOL.

#### 4. CONCLUSION.

##### 4.1. The Applicant and the ORS must not disrespect the interest of the people of SC and their Governor.

Because the better location solution was revealed, a **possible criminal negligence** case could face the management if this new location aspect will be ignored and the Jenkinsville location will be suggested to the NRC. In their Motion To Quash Subpoena dated December 8, 2008 on page 1, you may read: “**ORS is charged by law the duty to represent the public interest of South Carolina pursuant to S.C. Code Section 58-4-10 (B)(1) through (3) reads in part as follow:**

***‘public interest’ means a balancing of the following:***

***(1) concerns of the using and consuming public with respect to public utility services, regardless of the class of customer;***

***(2) economic development and job attraction and retention in South Carolina; and***

***(3) preservation of the financial integrity of the state's public utilities and continued investment in and maintenance of utility facilities so as to provide reliable and high quality utility services. “***

It seems that today the only true representation of the Governor’s and public interests are in my, Joseph “Joe” Wojcicki – intervenor hands, so my Motion to Change the Location of the Two New Reactors Planned by the Applicant is entirely in the public interest.

The Applicant response is practically a walkover because it has no actual calculation results or loads in the perspective of 2024, as well as this issue is not correctly covered in any of SCE&G or ORS rebuttals. Their Selection done in 1970 – 2005 is wrong even in rejecting Savannah River Site, which is located closer (about 120 miles) to Jasper County.

- 4.2. There is also significant evidence that the Jenkinsville location is against the interest of SCE&G shareholders and public utility services.
- 4.3. It should not be necessary to mention that none of the legal tricks may OVERRULE physics, chemistry, energy laws, and common sense. All of them support the AOL and disqualify Jenkinsville.
- 4.4. The Application had no proper final proofreading and its merit verification. The ORS panel did not make a serious review and secondary verification, since so many errors were not revealed, including the selection of the new reactors localization process that ignored public convenience and necessity.
- 4.5. The matter of avoiding multi-million dollar costs in electricity generation and distribution and saving water for other users in the Southeast drought zone is in the public convenience and necessity, which is in the scope of Commission review and decision.

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

This is to certify that I, Joseph Wojcicki, have this date served one (1) copy of the my Brief and proposed Order to the person(s) named below by causing said copy to be deposited in the United States Postal Service, first class postage prepaid and affixed thereto, and addressed as shown below:

Ruth Thomas  
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Or by Email Service to the parties named below:

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